

[LEDs](#)

## LEDs - Standard Configurations

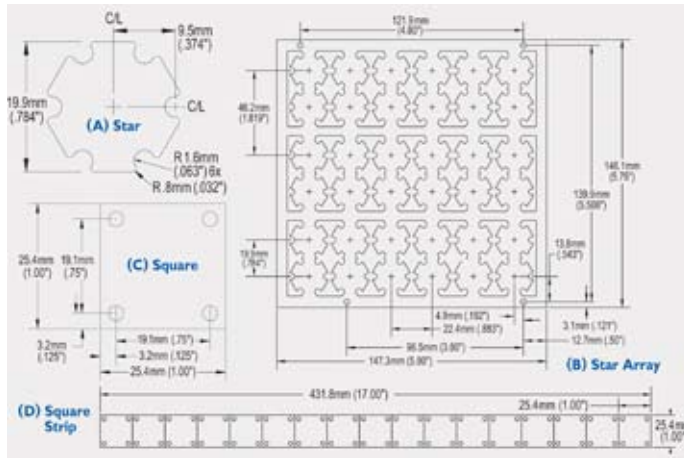
### IntroductionTemp. EffectPCB ComparisonHigh Power Lighting (HPL)T-Clad PATIM SolutionsStandard Configurations

Bergquist shortens the design cycle and speeds up your time to market.

Bergquist offers a family of standard thermally conductive insulated metal substrate (IMS) circuit boards specifically for LED applications which replace conventional FR-4 PCBs. Better thermal management allows more forward current to be applied to the LED, while still maintaining desired die temperatures, which means more light and possibly reducing the number of LEDs required to achieve the desired light output. With proper thermal management, Power LED lifetimes can be extended considerably.

Now you can get a jump-start on your design with one of these star or square substrates; available in single, strip or array configurations. Choose from 10 different LED footprints to give you the freedom to select the LED component's color, brightness and power that best fits your needs. Optimize the prototyping process with the lowest possible operating temperatures and the brightest light output for your next Power LED application. The most popular LED profiles on the world's most reliable IMS – matched for your design ease.

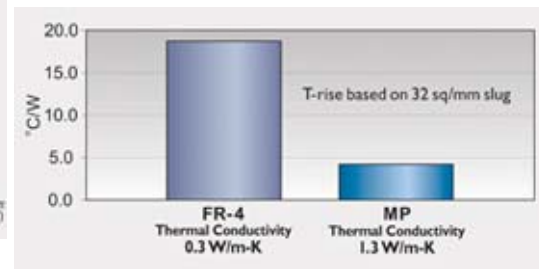
#### Standard Bergquist Thermal Clad® LED Configurations



#### Bergquist Thermal Clad® IMS Specs

Base Metal	1.57mm (0.062") Aluminum 5052
Thermally Conductive Dielectric	.076mm (3 mil) MP
Copper Circuit Foil	35 µm (1 oz) copper circuit foil
Surface Finish	White Solder Mask, Pb-free HASL solder pads (RoHS compliant)

#### Thermal Impedance of FR4 compared to MP



Standard Bergquist Thermal Clad® LED Configurations can be purchased through [Digi-Key®](#), [Quist Electronics](#), or [Mouser Electronics](#)

Bergquist Thermal Clad® - Standard Power LED IMS Selection Guide					
LED Footprint Type		Star Board (1-up) (A) Part No.	Star Array(36-up) (B) Part No.	Square Board (1-up) (C) Part No.	Square Strip (17-up) (D) Part No.
1	Osram Golden Dragon®	803128	803268	803118	803288
2	Osram Ostar SMT	803808	803809	803807	803810
3	Osram Oslon	804087	804561	804559	804563
4	Lite-On® LOPL	803123	803263	803113	803283
5	Lumex SML-LX	803124	803264	803114	803284
6	Lumileds™ Luxeon® I, III and V	803125	803265	803115	803285
7	Lumileds™ Luxeon® K2	803126	803266	803116	803286
8	Lumileds™ Luxeon® Rebel	803127	803267	803117	803287
9	Cree® XLamp® XR-E	803122	803262	803112	803282
10	Cree® XLamp® XP-E	804090	804091	804089	804092
11	Cree® XLamp® XP-G	804511	-	-	-
12	Cree® XLamp® MX-6	804450	-	-	-
13	Cree® XLamp® MC-E	803772	803790	803771	803806
14	Seoul Semiconductor Z-Power P4	803129	803269	803119	803289
15	Seoul Semiconductor Z-Power P5	803774	803803	803773	803804

16	Seoul Semiconductor Z-Power P7	-	-	803482	803805
17	Nichia Power LED 6.5 x 5.0	803291	803292	803290	803293
18	Nichia Rigel 3.5 x 3.5	804155	804562	804560	804564
19	Samsung Sunnix	804068	804069	804067	804070
20	Avago Moonstone™ Emitter	803121	803261	803111	803281
21	Citizen Electronics CLL600	-	805651	-	-
22	Citizen Electronics CL-L400	-	805652	-	-